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RELIGIOSITY IN EUROPE
An index, factors, and clusters of religiosity

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Abstract This paper has three aims. The first aim is to measure religiosity across all European countries through an index that combines beliefs, practices, and attitudes. The second aim is to analyse the strength of societal factors on religiosity, including modernisation, communist rule, national identity, religious pluralism, and religious freedom. The final aim is to group European countries by religiosity and to characterise each cluster by dominant religions and these five societal factors. Based on EVS 2008, it was applied multivariate analysis to reach these aims. Cluster 1 is mainly composed of Orthodox, Muslims, and Catholics; cluster 2 of Catholics, Orthodox, and people without religion; cluster 3 by people without religion, Protestants, and Catholics. Across clusters, the degree of human development, religious pluralism, and religious freedom increase, while the degree of national identity decreases.

Keywords religiosity, Europe, European Values Study (EVS).

Resumo Este artigo tem três objetivos. Primeiro: medir a religiosidade em todos os países europeus através de um índice que combina crenças, práticas e atitudes. Segundo: analisar o impacto de fatores sociais sobre a religiosidade, incluindo a modernização, o regime comunista, a identidade nacional, o pluralismo religioso e a liberdade religiosa. Terceiro: agrupar os países europeus pela religiosidade e caracterizar cada grupo pelas religiões dominantes e por estes cinco fatores sociais. Com base no EVS 2008 aplicou-se uma análise multivariada para atingir estes objetivos. O grupo 1 compõe-se principalmente de ortodoxos, muçulmanos e católicos; o grupo 2 de católicos, ortodoxos e sem religião; o grupo 3 de pessoas sem religião, protestantes e católicos. Observando os grupos, os graus de desenvolvimento humano, pluralismo religioso e liberdade religiosa aumentam enquanto o grau de identidade nacional baixa.

Palavras-chave religiosidade, Europa, European Values Study (EVS).

Résumé Cet article a trois objectifs. Premièrement : mesurer la religiosité dans tous les pays d'Europe, au moyen d'un indice qui combine croyances, pratiques et attitudes. Deuxièmement : analyser l'impact de facteurs sociaux sur la religiosité, à savoir la modernisation, le régime communiste, l'identité nationale, le pluralisme religieux et la liberté religieuse. Troisièmement : regrouper les pays d'Europe selon la religiosité et caractériser chaque groupe selon les religions dominantes et les cinq facteurs analysés. À partir de l'enquête EVS 2008, une analyse multivariée a été appliquée pour atteindre ces objectifs. Le groupe 1 se composait essentiellement d'orthodoxes, de musulmans et de catholiques ; le groupe 2 de catholiques, d'orthodoxes et de sans religion ; le groupe 3 de personnes sans religion, de protestants et de catholiques. Quand on observe ces groupes, les niveaux de développement humain, de pluralisme religieux et de liberté religieuse augmentent à mesure que le niveau d'identité nationale diminue.

Mots-clés religiosité, Europe, enquête sur les valeurs des Européens (EVS).

Resumen Este artículo tiene tres objetivos. Primero: medir la religiosidad en todos los países europeos a través de un índice que combina creencias, prácticas y actitudes. Segundo: analizar el impacto de factores sociales sobre la religiosidad, incluyendo la modernización, el régimen comunista, la identidad nacional, el pluralismo religioso y la libertad religiosa. Tercero: agrupar a los países europeos por la religiosidad y caracterizar cada grupo por las religiones dominantes y los cinco factores encima referidos. Basado en el EVS 2008 se aplicó un análisis multivariado para alcanzar estos objetivos. El grupo 1 fue compuesto principalmente por ortodoxos, musulmanes y católicos; el grupo 2 por católicos, ortodoxos y los sin religión; el grupo 3 por personas sin

religión, protestantes y católicos. Observando estes grupos, los niveles de desarrollo humano, pluralismo religioso y libertad religiosa aumentan, mientras el nivel de identidad nacional baja.

Palabras-clave religiosidad, Europa, estudio de los valores europeos (EVS).

Introduction

Modern Europe's varied cultural and religious landscape (Eisenstadt, 2000: 2) has given rise to numerous sociological studies, which either focus on one or few countries (e.g. Fernandes, 2003; Vilaça, 2001), its Eastern part (e.g. Pickel and Sammet, 2012; Tomka, 2011), its Western part (e.g. Arts and Halman, 2004; Bréchon, 2004, 2013a) or Europe as a whole. Many of these studies of whole Europe have used survey data from the European Values Studies (EVS) (Bréchon, 2013b; Halman, 2003; Halman and Draulans, 2006; Halman and Riis, 2002; Lambert, 2004), and other international databases or surveys (Greeley, 2003; Pickel and Muller, 2009; Pollack, 2008; Pollack, Muller and Pickel, 2012).

Based on these studies and datasets, I propose to develop an original analysis which intends to accomplish three goals. First, to measure religiosity in all European countries; second, to analyse the influence of various societal factors on religiosity; third, to group European countries by religiosity. Thus far, very few have attempted to develop an index of religiosity for Europe as a whole: Halman and Draulans (2006) produced one, though based on only five indicators of beliefs. Further, few studies explained differences in the level of religiosity. Two international studies, which included European countries (Hollinger, Haller and Valle-Hollinger, 2007; Norris and Inglehart, 2004), displayed some factors, albeit with limitations: the first approached only Christian countries and had few indicators in its index (two on beliefs and two on practices); the second, although included eight indicators (four on beliefs, two on practices, and two on values), did not produce a religiosity index and was focused in the global world. Finally, I ignore the existence of any research that attempts to cluster European countries by religiosity.

Although some scholars argue against comparing Western and Eastern Europe with the current available indicators, I suggest that it is possible to evaluate the degree of religiosity among all European countries. Tomka (2006: 262) argued that pre-modern conditions, popular piety, and communism diminished the strength of institutionalised religion, asking for a specific approach to religion in Eastern Europe. Contrarily, I consider that some features may be used to characterise religions across all European countries. International databases, such as the European Social Survey (ESS), the European Values Study (EVS), the International Social Survey Programme (ISSP), and the World Values Survey (WVS) exhibit an array of indicators that enable this task. But, instead of measuring religiosity based on separate indicators, I suggest that it is necessary to build a

complex index. In this article, I will focus on the 2008 EVS, because it is the most complete dataset, showing values for all, except five, European countries and includes a broad set of indicators. Brill has published a few studies with the 2008 EVS data (e.g. Halman, Sieben and Van Zundert, 2012). This gave a global overview of European values, including religious ones, although it neither explained nor aggregated indicators.[1]

Firstly, I discuss the factors that influence European religiosity. Secondly, I describe the methodological procedures, including the selection of dimensions and indicators. Thirdly, I present and discuss results for the index of religiosity, the importance of each factor, and the grouping of countries regarding religiosity. Fourthly, I draw my conclusions.

Factors of religiosity

Major religion

According to Cipriani (2009), European religions have their own territory or area of influence: Northwest is dominated by Protestantism, Southwest by Catholicism, and East by Orthodoxy, though Islam also has a significant influence in the Southeast. The West is the territory of modern great powers, where religious hegemony was disputed between Protestants and Catholics, recalling old quarrels between Papacy and Empire: Scandinavian and German culture is mainly Protestant; the Southwest is almost entirely Catholic, deeply marked by Roman culture and in some countries by past Inquisition and military orders. The East is characterised by the presence of empires (Eastern Roman, Ottoman, Russian, Austrian, and Soviet) that produced cultural and religious heterogeneity, despite the prevalence of Slavic culture and Orthodox religion.

Thus, the first question arrives naturally: how does belonging to a certain religion influences an individual's religiosity? Here is not the place to discuss the rich variety within each religion, so only a brief summary is provided. Each religion has its core doctrine and rites, with Protestants being probably the most diversified, due to historical, theological, and philosophical reasons. Muslims are perhaps the strongest believers due to their obligation to believe in Allah and Muhammad as messenger, the first pillar of Islam (*shahada*). Even if Christian religions do not impose believing, the strict hierarchical organisation of Catholicism somewhat commands its dogmas and doctrine to the Catholics, disallowing heterodox creed. While the Catholic Church stands up by organisational and intellectual strength, as well as powerful prescriptions and clear regulations, on the contrary the Orthodox Church is dominated by informal institutionalisation and local standards (Tomka, 2006: 259). Therefore, Orthodox Church's control is weaker, relying mostly on the

1 The site www.atlasofeuropeanvalues.eu shows the results of EVS data, as well as WVS data, allowing the preparation of European and world maps.

management of the symbolic universe through liturgy and sacraments, which may allow heterodoxies. Protestant tradition challenges the unique and indisputable truth promulgated by the Catholic Church. In these Churches, mainly Calvinism, which is the furthest from Catholicism in terms of organisation, theology, and rite, each individual follows the principle *Sola Scriptura*, meaning that although guided by the authority of the Bible, every Protestant has clearance to think and to develop his/her own beliefs.

Religious practices are also distinct among the four major European religions. Islam demands that male Muslims attend mosque every Friday, included in the second pillar of Islam (*salah*). In this case, this indicator can be confusing, because it probably does not include female presence, underestimating full religious service attendance. Orthodoxy has the richest ritualism, but attending church is not a requirement and people do it particularly during festivals (Naletova, 2009: 386). Catholicism has probably the second richest ritualism. One of the five commandments of the Catholic Church (not to be confused with the Old Testament 10 Commandments) demands Mass attendance on Sundays and holy days. In Protestantism, Anglicanism has the highest degree of ritualism and Calvinism has the lowest. For Protestantism, service attendance is not mandatory, which may well induce higher absenteeism.

As James (1952: 454) put it, prayer is "the very soul and essence of religion", an interior dialogue between God and man. Muslims probably have the highest frequency of prayer practice, given their obligation of praying five times daily, the second pillar of Islam (*salat*). Because praying is not mandatory for Christians, they probably pray less than Muslims. In Orthodoxy and Catholicism, the popular piety, the cult of saints and the cult of Mary, are likely to stimulate higher levels of prayer than in Protestantism, where these cults are absent. Once again, Anglicanism in its High Church is closer to Catholicism than the other forms, mainly Calvinism.

Regarding the consequential dimension, Islam has a stronger control on people's lives than Christian religions. The close regulation of religion on the secular realm restrains Muslims' behaviours and attitudes. In Muslim countries, the practices of homosexuality, euthanasia, abortion, and casual sex, are condemned by Islamic doctrine. In Catholicism, control is not as strict as in Islam, but the ecclesiastical authority is still felt, especially in social contexts where Catholicism reinforces national identity. Social control is lower in Orthodoxy, where there is a flexible application and interpretation of canonical law: the clergy have a certain amount of freedom to deal with controversial issues such as abortion (Naletova, 2009: 380). Lastly, the Catholic centripetal command is wholly inexistent for Protestants, as part of their tradition and history. One of the brands of Protestantism is the protest, the revolt against authority and hegemonic expression. Besides this detachment from authority, Protestantism is usually more progressive or forward-thinking than Catholicism.

Modernisation

The second factor is modernisation, particularly its facet of secularisation. From the various available contributions to the paradigm of secularisation, I will focus on the theory of Norris and Inglehart (2004). In order to update the classical theory of secularisation and to test it worldwide, Norris and Inglehart (2004: 217-223) developed a new theoretical complex of hypotheses, of which three are relevant for this discussion. The religious values hypothesis argues that "growing up in societies in which survival is uncertain is conducive to a strong emphasis on religion" and vice-versa. The religious culture hypothesis suggests that "the historically predominant religious tradition of a given society tends to leave a lasting impact on religious beliefs and other social norms". The religious participation hypothesis claims that the declining importance of religion, beliefs, and social norms would erode regular participation in religious practices. According to these hypotheses, the degree of secularisation influences religious decline (beliefs, practices, and norms), which depends on the impact of religious culture: the more significant a religious culture, the less steep the religious decline.

Yet, each religious culture is unique and has different impacts on people. Academics like Eisenstadt (2000) and Taylor (1995) regard modernity in multiple ways, depending on each culture's features. Modernity's impact on Europe is more observable in Protestant and Catholic societies, where industrialisation first took place, while in Muslim and Orthodox societies economic development began later, delaying the growth of HDI.[2] As a matter of fact, of all European countries with very high HDI, only Greece and Cyprus are not Protestant and Catholic, while all European countries with high or medium HDI are Orthodox or Muslim.[3]

Heelas and Woodhead (2005) have argued that in modern culture there is a subjective turn from life-as forms of the sacred to subjective-life forms of the sacred. This spiritual revolution shifts the emphasis from transcendent to inner sources of significance and authority, empowering the individual. According to Inglehart and Welzel (2005: 31-32), in post-industrial societies, with the loss of authority, traditional religions weaken in favour of spiritual and individualised ways of personal expression. Thus, individualisation is mainly applied to Protestant and Catholic countries. In Orthodox and Muslim countries, besides their lower HDI, the authority of religious institutions is higher, due to the strong bond between religion and politics. Therefore, it may explain higher values of beliefs, practices, and attitudes for Orthodox and Muslims.

2 HDI is the human development index and the most reliable measure of modernisation. It will be addressed on the methodological framework.

3 HDI values of 2011. Source: UN site.

Communism and national identity

Communism is another central factor that explains Europe's current religious landscape. Until twenty years ago, communism [4] ruled over the Eastern half of Europe: Russia was communist for seventy years (1922-1991) the USSR for forty years (1946/1952-1989/1991); Yugoslavia created an alternative communist power from 1946 to 1991-1992; Albania shaped its particular communist regime from 1944 to 1992. Orthodoxy was dominant, followed by Catholicism: eleven countries were Orthodox, seven were Catholic, three were Muslim, one was Protestant, and three were mixed (one Muslim and Orthodox, one Protestant and Orthodox, and other evenly distributed by the three Christian religions). Communism overpowered all Orthodox countries, except Cyprus and Greece, and was less present in Protestant countries. While in Western Europe hegemonic religion was not persecuted, in communist regimes of Eastern Europe religion was ill-treated. Certainly, the impact of mobbing varied by country: in Russia, Belarus, and East Germany persecution was strong, while in countries such as Poland and Romania it was much weaker.

Besides the negative impact of communism on religion, there is another type of impact strictly linked to national identity. Norris and Inglehart (2004: 118) consider the stimulus of religiosity in ex-communist countries, where the church was actively involved against communism. When people are oppressed by a foreign power and the national church defends, helps, and leads the fight for independence, the conditions for religious belonging, believing, practising, and obedience are strengthened. As Hollinger, Haller and Valle-Hollinger (2007: 137) point out, in a nationalist popular church system, the church and its representatives help the population to preserve their cultural identity against a foreign power that subjected the country, contributing to fuse national identity and religiosity, and so leaving the church highly regarded in popular consciousness.

Before the fall of communism in Eastern Europe, the role of the Catholic Church in fostering nationalism was stronger than that of the Orthodox Church, while after the fall of communism the roles were reversed. For Borowik (2006: 269), the Catholic Church "had a strong oppositional tradition in relations with the state and strong international and organisational structures that have allowed it to defend local churches from an international position", unlike the Orthodox and Protestant churches, where these tools to challenge communist regimes were absent. As the level of persecution, the level of subjugation versus fight against communist authorities by each religion varied by country. The prominent position of Catholicism is particularly revealed in the Baltic countries: Estonia is religiously mixed, more Orthodox than Protestant; Latvia is evenly divided between Protestants, Catholic and Orthodox; Lithuania is predominantly Catholic. Lutheran

4 Communism subjugated several countries in the USSR (Armenia, Azerbaijan, Belarus, Estonia, Georgia, Latvia, Lithuania, Moldova, Russia, and Ukraine); in Yugoslavia (Bosnia and Herzegovina, Croatia, Kosovo, Macedonia, Montenegro, Serbia, and Slovenia); in Albania; or in the socialist republics under the Soviet orbit (Bulgaria, Czech Republic, East Germany, Hungary, Poland, Romania, and Slovakia).

Estonians and Latvians religious leaders were much more willing to make compromises with the Soviet authorities as opposed to the Lithuanian Catholic authorities, who were more closely linked to national traditions and feelings (Plaat, 2003: 64).

After the fall of communism, the Orthodox link between religion and politics was reactivated, something unknown in Catholic world. In Orthodox countries, religious pluralism promoted by communism was limited by the state at the request of the major religion, in order to reduce competition and thereby increase its influence (Froese, 2004: 73). The Orthodox Church became a spiritual refuge and a channel of national and cultural identity, serving as the only institution that mediates the fears and discontentment produced by the social changes that the fall of communism caused (Bogomilova, 2005: 1-2). However, the conservatism of religious organisations makes it difficult for them to adapt to new social and cultural trends, preventing religious growth. Furthermore, decades of atheistic propaganda developed behaviours and attitudes contrary to those of religion.

National identity is also developed under non-communist regimes, when foreign rule and/or Orthodox dominion exist. There are ten countries in this category. Northern Ireland distinguishes itself by the foreign rule of the British and Anglicanism until 1998. Kosovo's case is singular: part of Serbia under communist rule, it declared independence in 2008. From this group, Greece is the only country that did not gain independence during the twentieth century: Cyprus (1960), Ireland (1922), and Malta (1964) became autonomous from the British Empire; Northern Cyprus (1983) from Cyprus; Finland (1917) from the Russian Empire; Iceland (1918) and Norway (1905) from Denmark. Although past changes may have long-lasting impact on generations, by cutting, maintaining, or enhancing religious transmission, the most recent changes have stronger effects on present generations. I would argue that when those ruled and their rulers are of different religions, there is greater probability of seeing a strengthening of the country's native religion due to nationalism. On the contrary, when the religion of rulers and ruled are the same, the link between religion and nationalism is broken. As a matter of fact, quite often the nationalist movements base their doctrine in what is different from the ruler, in terms of ethnicity, culture, and religion. Moreover, the national identity is strengthened in Orthodox countries, like Greece and Cyprus, according to the argumentation referred above.

Religious pluralism and religious freedom

Religious pluralism and religious freedom are the final issues to discuss. For USA scholars, market theory is the best alternative to secularisation: denominational competition and state regulation of religious institutions shape religious participation for all faiths and places (Norris and Inglehart, 2004: 95). Thus, the individual chooses religion like any other product, evaluating costs and benefits in order to maximise one's profit (Iannaccone, 1992: 124). Competition stimulates suppliers to produce alternative faiths well adapted to consumers' needs, contrary to state-sponsored monopoly (Iannaccone, 1992: 128).

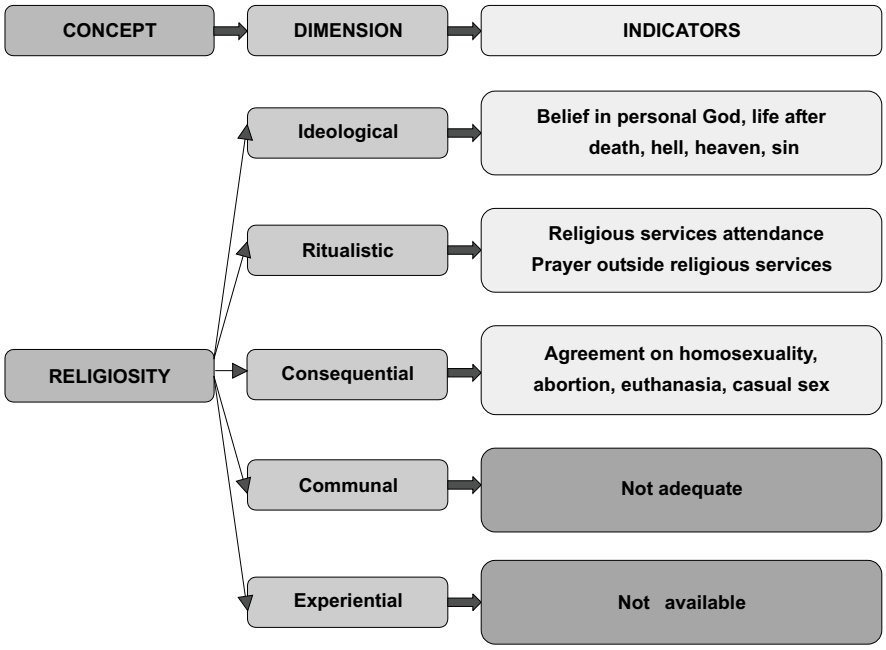

Figure 1 Explanatory model of religiosity: concept, dimensions, and indicators

Yet, Norris and Inglehart (2004: 100-103) did not find any significant relationship between religious participation and both religious pluralism and freedom. They actually found the opposite: religious homogeneity, combined with state regulation, induces higher religiosity (Norris and Inglehart, 2004: 230). The key issue for these authors is not market theory and its assumptions but secularisation based on human development: what produces higher and lower religiosity is lower and higher development, respectively.

Combined with different levels of modernisation within Europe, there are various degrees of pluralism and freedom. Nevertheless, there is a general lack of pluralism, as a consequence of an old tradition of state religious tutelage. Western supremacy was mainly observed in Protestant countries, where the national church did not obey any international power like in Catholicism. However, the churches' independence in Catholic countries was lessened chiefly due to regalist politics. Eastern supremacy is millennial: from the Roman emperor as maximum pontiff, up to the domination of basileus and tsars over the patriarchs of Constantinople and Moscow, a role after taken over by the general secretaries of the Communist Party. In democracy, the close link between religion and ethnic/national identity inhibited the extension of pluralism (Dietzel and Makrides, 2009: 80).

Methodological framework

Religiosity — dimensions and indicators

This study focuses on levels of religiosity among two traditional religions in Europe (Christianity and Islam). Spirituality, which is linked to the individual quest for human development or meaning and detached from religious traditions, will not be surveyed here, due to its limited societal expression. I will begin by defining the key dimensions of religiosity from which I will go on to produce empirical indicators (see figure 1). First, let us consider religion as a system composed of experiences, beliefs, practices, values, and organisations related to the sacred. Religiosity comprises the belief in and relationship with a transcendent being, which is mediated through a community and expressed in institutionalised practices, attitudes, and behaviours (Fernandes, 1972: 18-19).

Religion and religiosity can be broken down into five dimensions: experiential, ideological, communal, ritualistic, and consequential. This conceptualisation is supported by the seminal studies of Fichter (1951) and Glock and Stark (1969). Fichter (1951) was the first to produce a multidimensional approach to religion/religiosity composed of four dimensions: creed, code, cult, and communion. Glock and Stark (1969) further developed this model to include five dimensions: experiential, ideological, ritualistic, intellectual, and consequential. I haven't included the intellectual dimension, due to its higher educational capital and connection to the upper social class.

Whilst these five dimensions express religiosity in its entirety, the experiential and communal dimensions won't be used in this study, because the EVS database does not include indicators that can be used to assess these two dimensions. The experiential dimension involves feelings, emotions, and sensations raised by the supernatural (see Laermans, 2006; Simmel, 1998; Watier, 1996). Though degree of spirituality and importance of God are the closest to this dimension, they do not roundly reflect it, since they do not measure real experience. The communal dimension implies an affiliation to a religious group (Fichter, 1969: 173), a sense of belonging, confidence, and involvement in its activities. The indicators religious belonging and confidence in the church could be used. Yet, their use would not guarantee individual religiosity: a religious person usually belongs and confides in the church, but the contrary is not always true. Indeed, religious belonging depends on the interpretation made by the interviewed. This interpretation may include, among others, believing in God or Allah, and/or going to church or mosque, and/or praying to God or Allah, and/or following religious norms, and/or performing rites of passage.

Based in the remaining three dimensions — ideological, ritualistic, and consequential — I select the indicators most suitable for both religions from the EVS. The ideological dimension concerns central beliefs for each religion and valid for all of them. Its monotheism contains as central the belief in a personal god. Beliefs in life after death, hell, heaven, and sin extend both to Islam and Christianity. Thus, these indicators will be applied.

The ritualistic dimension includes religious practices, embracing indicators such as attendance of religious services and private prayer. The EVS includes one

more indicator: moments of prayer, meditation, and contemplation. Yet, this indicator is too broad to quantify traditional religiosity, being more useful as a measure of modern spirituality.

Lastly, the consequential dimension comprises people's attitudes in relation to religious norms.[5] According to Cipriani (2004: 304), religion is basically an agent for diffusing values. Since the EVS presents a considerable number of potential indicators, I had to apply an exploratory principal components analysis (PCA) to select the most suitable and correlated indicators. Once the indicators had been grouped into components, I selected the most appropriate indicators to compose the consequential dimension. From 20 quantitative indicators, belonging to the same set of questions, the PCA produced four components:[6] sexuality and life (nine indicators), honesty (eight indicators), genetic manipulation (two indicators) and death penalty (one indicator).

The component of sexuality and life is the most appropriate to include as a measure of the consequential dimension of religiosity. For example, the Catholic Church is extremely firm in its defence of responsible sexuality, heterosexuality, and life. On the other hand, religious leaders certainly do not need to promote honesty, due to its universality, independently of religiosity. Genetic manipulation is a more complex issue, not accessible to everyone, and its inclusion could lead to misleading results. Finally, death penalty is an ambiguous and multifaceted topic, when considering Muslim countries.

From the component of sexuality and life, I considered that five indicators were not adequate. These were: "Taking soft drugs": this indicator wasn't correlated with the other eight indicators and its loading is below 0.5. "Prostitution and suicide": both are universally rejected by religion. "In-vitro fertilisation": this is a complex topic which is likely to confuse participants. "Divorce": its acceptance is increasing, even amongst religious people, possibly due to its legislation.[7] Thus, I considered, homosexuality,[8] abortion,[9] euthanasia,[10] and casual sex as crucial issues

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5 It is necessary to distinguish attitudes from behaviours. Usually, people that truly believe and practise think and behave in accordance with their religion. Though, there are religious people that do no behave following religious norms, but certainly think in an orthodox manner. Therefore, consequential dimension has to include not behaviours but only attitudes.

6 PCA with Varimax rotation explained 56.2% of the variance; KMO = 0.922; Bartlett's Test of Sphericity: $\chi 2$ (190) = 367619.122, p = 0.0001. The indicators and respective loadings for each component were the following: "sexuality and life" (homosexuality – 0.791; divorce – 0.773; abortion – 0.762; euthanasia – 0.632; having casual sex – 0.614; prostitution – 0.604; suicide – 0.591; in-vitro fertilisation – 0.525; taking soft drugs – 0.448); "honesty" (cheating on taxes – 0.740; accepting a bribe – 0.716; lying in own interest – 0.661; avoiding fare public transport – 0.660; claiming state benefits – 0.648; joyriding – 0.620; paying cash to avoid taxes – 0.555; adultery – 0.537); "genetic manipulation" (manipulation food – 0.813; experiments human embryos – 0.776); "death penalty" – 0.742.

7 All countries allow divorce, except the Vatican City. Here are some dates of divorce legislation: France: 1792; Portugal:1910/1977; Italy: 1974; Spain: 1981; Ireland: 1997.

8 All European countries analysed in this study allow same-sex relationships, but only 20 countries recognise them (Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Hungary, Iceland, Ireland, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland, United Kingdom) and only ten countries allow same-sex marriage (Belgium, Denmark, France, Iceland, Netherlands, Norway, Portugal, Spain, Sweden, United Kingdom).

to distinguish religious from non-religious people.[11] The Bible and the Koran champion responsible sexuality, the importance of marriage and family, heterosexuality as a mean for procreation and coupling; and life, as gift of God.

Techniques applied and their procedures

There are three sets of analyses I undertook: developing an index of religiosity, rating the importance of each factor in it, and the grouping of countries regarding religiosity. For the first set of analyses I applied PCA, a technique that allows reducing a great array of variables into one or few components. PCA produces standardised means (dimensions), which enable comparisons between countries. Since variables of beliefs and practices are nominal and ordinal respectively, PCA was applied only for variables related to attitudes.[12] The qualitative variables were transformed into numerical ones (using dummy variables) in order to produce standardised means. I first extracted the dimension of beliefs by considering positive answers ("1") on beliefs in life after death, hell, heaven, and sin, and the category "personal God". Thus, the scores range from "0" (do not believe in any of the five beliefs) to "5" (believe in all five beliefs). Second, I obtained the dimension of practices by adding up the variables of prayer and attendance of religious services. The scores ranged from "2" (never) to "14" (more than once a week/everyday). Finally, to these three standardised dimensions PCA was applied, which produced the index of religiosity.[13]

For the second set of analyses, I used multiple linear regression (MLR) to measure the impact of each factor on religiosity. The dependent variable was the index of religiosity, while the independent variables were inequality-adjusted human development index (IHDI), communist rule, national identity, religious pluralism, and religious freedom. MLR is applied only to quantitative dependent and independent variables and, in some cases, ordinal variables (Maroco, 2010: 631). To employ MLR with nominal independent variables, they have to be

9 All European countries analysed in this study have legalised abortion, except Malta. Ireland is the only country where abortion is only allowed to save a woman's life. Finland, Iceland, Luxembourg, Poland, and the United Kingdom are the sole countries where abortion is allowed to save a life or due to other reasons. In the other countries, abortion is allowed on request. The first legislation in Europe to allow abortion was the Abortion Act (1967) in the United Kingdom.

10 Euthanasia is allowed only in three European countries: Belgium (2002), Luxembourg (2009), and Netherlands (2002). In Switzerland assisted suicide is allowed since 1942.

11 Cronbach's Alpha is 0.768, which indicates good internal consistency.

12 KMO = 0.773; Bartlett's Test of Sphericity: $\chi^2(6) = 57857.997$, $p < 0.001$. Communalities: homosexuality: 0.633; abortion: 0.661; euthanasia: 0.579; and casual sex: 0.490. Total variance explained: 59.062%. Loadings: homosexuality: 0.813; abortion: 0.796; euthanasia: 0.761; and casual sex: 0.700.

13 KMO = 0.648; Bartlett's Test of Sphericity: $\chi^2(3) = 45431.159$, p 0.001. Communalities: dimension of beliefs: 0.720; dimension of practices: 0.762; and dimension of attitudes: 0.533. Total variance explained: 67.156%. Loadings: dimension of beliefs: 0.873; dimension of practices: 0.848; and dimension of attitudes: 0.730. When crossing the countries with indicators, dimensions, or index, the weight was applied. For Italy, the indicator of attitude toward homosexuality was absent, so a specific dimension of attitudes and index of religiosity was constructed.

transformed into dummy variables, as in variables "communist rule" and "national identity".

I used only the utmost important and consistent societal indicators as independent variables. The inequality-adjusted human development index (IHDI), produced by the United Nations Development Programme (UNDP), is the HDI (human development index) taking into account inequality. According to Norris and Inglehart (2004: 50), HDI is the broadest summary scale of modernisation and subsequently of secularisation. But HDI does not consider the different levels of income within a population, when socioeconomic equality is critical for spreading human security. Norris and Inglehart (2004: 16) consider that "otherwise growth only enriches the affluent elite and the governing classes", like in many mineral and oil-rich nations, such as Venezuela and Saudi Arabia. In order to assess the real spreading of secularisation, human development has to consider the level of inequality. To compute the HDI, health, education, and income's average values are "discounted" according to their level of inequality as measured by the Atkinson index. This index is based on the assumption that a society has a certain level of aversion to inequality. Thus, the IHDI is the actual level of human development, while the HDI is the potential level of human development if there were no inequality. The IHDI is always lower than the HDI, especially with higher inequality.

For both communist rule and national identity, because there are no indicators available, a dummy variable was produced (0 – without, 1 – with). For communist rule: 0.2 for Germany (about 1/5 of this country was communist until 1990). For national identity: 0.5 for Estonia (about 1/2 of this country is Orthodox) and 0.67 for Latvia (about 2/3 of this country is Orthodox and Catholic). For this factor, Germany's value is 0, because the current religious population of East Germany is clearly Protestant with few Catholics. Lastly, for national identity, the value "1" is only applied to countries included in one of the two following groups: the first includes countries under communist rule, where Catholicism and Orthodoxy were important before and after the fall of communism respectively; the second contains countries under foreign rule until the twentieth century with different religion from the ruler, as well as Orthodox countries.

For religious pluralism, the Herfindahl-Hirschman index (HHI) was utilised, an indicator used by scholars as Norris and Inglehart (2004). It measures the amount of competition among firms in a specific industry and is accounted by adding the squares of each firm's market share ($s_1^2 + s_2^2 + \ldots + s_{47}^2$). The original values for each religion were from the EVS (2011) and were recalculated taking into account the exclusion of missing values and values of people without religion. The values of religious pluralism (1 — sum of squares) are the following: 0.75 (low pluralism), 0.75-0.85 (moderate pluralism), 0.85 (high pluralism).

For religious freedom, the four indexes of the Association of Religion Data Archives (ARDA) were employed, inverting the original values (current value = 40 — original value). Government regulation of religion index considers the government interference in religious freedom. In short, it determines the rights to individual practice and to the work of religious organisations, including foreign religions. Government favouritism of religion index measures the government funding of

Table 1 Indicators and dimension of beliefs

Country	Personal God	Life after death	Hell	Heaven	Sin	Dimension
Turkey	90.6	92.5	96.7	96.7	97.8	1.28
Malta	65.1	81.1	79.3	84.2	89.5	.89
Northern Cyprus	89.8	70.9	74.9	75.2	87.4	.88
Azerbaijan	74.4	74.1	71.8	74.7	73.3	.73
Kosovo	77.2	68.7	69.5	71.7	74.1	.69
Georgia	94.3	44.8	65.3	70.3	85.0	.68
Poland	78.5	66.1	60.8	70.7	80.9	.67
Northern Ireland	57.5	62.3	64.6	74.2	86.2	.60
Cyprus	83.4	52.6	44.6	51.5	85.1	.46
Romania	33.9	58.1	66.1	69.0	86.4	.44
Greece	69.5	48.8	47.2	51.0	76.4	.34
Ireland	53.4	59.7	42.1	67.2	67.8	.32
Moldova	43.9	49.8	55.8	58.5	80.2	.31
Bosnia Herzegovina	23.9	60.8	62.1	65.5	69.6	.28
Armenia	57.9	41.9	45.7	48.4	73.5	.20
Italy	58.9	56.9	41.4	50.3	45.8	.13
Ukraine	55.0	38.0	39.5	44.0	76.5	.13
Croatia	40.9	50.1	39.8	52.3	61.3	.08
Slovak Republic	38.4	55.2	39.2	46.2	60.1	.06
Portugal	59.0	41.3	30.5	41.2	56.9	.00
Lithuania	41.0	45.2	33.9	36.4	66.4	-.03
Iceland	39.4	61.8	15.9	41.9	55.6	-.07
Russian Federation	41.8	34.2	31.9	33.0	60.7	-.14
Great Britain	25.0	44.3	28.6	46.4	57.2	-.14
Spain	43.5	41.0	27.5	41.4	43.8	-.16
Belarus	25.5	35.3	33.9	36.3	57.9	-.21
Austria	25.7	51.6	23.8	35.9	51.6	-.21
Macedonia	36.6	34.9	32.2	35.8	45.9	-.22
Hungary	40.9	33.3	24.4	33.1	50.1	-.24
Montenegro	25.5	26.6	28.6	34.7	62.3	-.26
Switzerland	26.4	44.6	18.3	39.3	45.6	-.28
Latvia	9.0	40.5	26.5	33.0	59.1	-.31
Finland	34.0	34.0	17.2	33.7	41.6	-.35
Serbia	18.7	29.1	25.4	32.1	54.6	-.36
Netherlands	23.9	45.8	15.0	37.2	36.3	-.36
Belgium	21.6	40.4	17.1	34.0	43.9	-.37
Albania	53.0	20.8	21.0	30.1	31.6	-.37
Bulgaria	32.5	24.1	22.1	25.3	51.9	-.38
Norway	22.9	44.9	14.9	38.8	30.8	-.40
Luxembourg	27.4	40.9	17.7	25.6	36.9	-.42
Germany	21.7	34.7	16.6	30.8	42.6	-.43
France	17.6	39.3	16.6	31.6	38.9	-.44
Slovenia	22.0	32.2	16.9	28.7	40.7	-.46
Estonia	18.0	28.2	15.2	21.1	40.8	-.55
Czech Republic	10.2	23.8	15.1	18.9	38.3	-.63
Denmark	21.3	33.2	8.8	18.5	19.6	-.66
Sweden	13.7	33.9	7.6	19.0	13.3	-.73

Note: All percentages include missing values. Percentages express the answer “yes”.

religion (education, buildings, clergy, media, social assistance, and missions) and favouritism towards a specific religion. Social regulation of religion index evaluates the attitudes of individuals and of established religions towards new religions. Religious persecution quantifies the people who are physically abused and displaced.

Table 2 Indicators and dimension of practices

Country	Religious services	Prayer	Dimension
Malta	6	7	1.02
Turkey	4	7	.78
Poland	6	6	.75
Romania	4	7	.72
Kosovo	4	6	.69
Cyprus	5	6	.58
Azerbaijan	4	7	.56
Moldova	4	6	.52
Greece	4	6	.44
Italy	4	6	.43
Ireland	5	6	.42
Armenia	4	6	.42
Northern Cyprus	3	7	.35
Georgia	4	6	.35
Bosnia Herzegovina	4	5	.35
Northern Ireland	4	6	.32
Croatia	4	5	.23
Slovak Republic	4	5	.18
Ukraine	4	5	.14
Macedonia	4	3	.01
Albania	2	5	-.01
Portugal	4	4	-.02
Serbia	4	4	-.10
Lithuania	4	3	-.11
Belarus	4	3	-.15
Austria	4	3	-.17
Switzerland	2	3	-.27
Bulgaria	4	3	-.28
Latvia	3	3	-.28
Iceland	3	3	-.29
Spain	2	3	-.29
Montenegro	3	3	-.30
Russian Federation	3	3	-.34
Luxembourg	3	2	-.34
Netherlands	2	2	-.38
Slovenia	4	2	-.38
Germany	2	2	-.39
Hungary	2	2	-.40
Finland	2	3	-.42
Belgium	1	2	-.51
Norway	2	2	-.54
Great Britain	1	1	-.57
Denmark	3	2	-.57
Estonia	2	1	-.67
France	1	1	-.73
Czech Republic	1	1	-.78
Sweden	1	1	-.81

Note: Scores of both practices express the median for each one.

For the third set of analyses, clusters analysis (CA) was used to group and to quantify countries (categories) in terms of religiosity (criterion). Major religion (Catholic, Protestant, Orthodox, Muslim, and without religion), IHDI, communist rule, national identity, religious pluralism, and religious freedom were used as characterising variables. For clusters analysis, usually non-hierarchical methods are more rigorous

Table 3 Indicators and dimension of attitudes

Country	Homosexuality	Abortion	Euthanasia	Casual sex	Dimension
Kosovo	9.72	9.19	9.48	9.40	.96
Turkey	9.52	9.08	8.79	9.46	.85
Armenia	9.81	8.10	8.43	9.71	.77
Azerbaijan	9.41	9.45	7.86	9.03	.74
Moldova	9.26	8.69	8.36	9.23	.73
Georgia	9.86	8.05	8.58	9.21	.72
Cyprus	8.64	8.72	9.00	8.82	.67
Malta	6.86	9.49	8.36	9.73	.61
Northern Cyprus	8.89	7.91	7.58	9.36	.53
Albania	8.91	7.81	8.31	8.74	.51
Bosnia Herzegovina	9.30	8.02	8.10	8.26	.51
Ukraine	9.40	7.59	7.31	8.49	.40
Montenegro	9.32	7.07	7.94	8.15	.39
Romania	8.82	7.30	7.80	8.68	.39
Macedonia	8.98	6.69	7.86	7.82	.30
Serbia	9.20	7.09	7.46	8.10	.30
Poland	8.16	7.73	7.63	8.02	.28
Croatia	8.60	7.49	7.00	8.30	.27
Bulgaria	8.19	6.34	6.71	8.69	.11
Latvia	8.59	7.10	6.24	7.93	.11
Russian Federation	8.80	6.66	6.64	7.64	.09
Estonia	8.65	6.71	6.33	7.96	.08
Italy	n/d	7.51	6.47	8.05	.07
Lithuania	9.02	6.59	6.06	8.03	.05
Belarus	8.38	6.94	6.22	7.24	-.02
Northern Ireland	6.60	7.68	6.51	7.94	-.02
Hungary	7.81	6.21	6.55	7.62	-.07
Greece	7.12	6.84	7.63	6.62	-.08
Ireland	5.80	7.76	7.14	7.43	-.08
Portugal	6.71	6.50	6.29	8.18	-.13
Slovak Republic	5.88	6.68	6.57	7.41	-.23
Austria	5.70	6.39	6.49	7.47	-.29
Germany	5.29	6.40	6.19	7.43	-.37
Slovenia	7.04	5.17	5.49	7.60	-.39
Czech Republic	6.04	5.61	5.67	7.41	-.43
Great Britain	5.50	6.16	5.36	7.38	-.46
Switzerland	4.65	5.96	5.95	7.42	-.52
Belgium	5.24	6.01	4.24	8.03	-.55
Luxembourg	4.73	6.10	4.91	7.56	-.59
Spain	4.95	6.09	4.92	6.21	-.74
France	5.25	4.99	4.25	7.06	-.78
Netherlands	3.30	5.63	4.33	7.45	-.85
Norway	3.92	4.74	5.38	6.86	-.85
Finland	4.40	4.63	5.09	6.53	-.89
Denmark	3.72	3.55	4.21	7.12	-1.09
Iceland	2.72	5.05	5.22	5.42	-1.11
Sweden	3.19	3.27	4.46	5.26	-1.38

Note: Scores of attitudes express the average for each one.

than hierarchical methods, though the application of the first type of methods presupposes the previous definition of the number of clusters (Maroco, 2010: 445). First, to decide the number of clusters, I used Ward's method by reading the graph of agglomeration coefficients. Secondly, I used the non-hierarchical method of K-means to

Table 4 Factors of religiosity

Country	Relig.	IHDI	CR	NI	RP	RF
Turkey	1.20	0.542	0	0	0.005	16
Malta	1.05	0.741	0	1	0.034	30.9
Kosovo	.98	0.637	1	1	0.360	21
Azerbaijan	.84	0.62	1	1	0.119	14.7
Northern Cyprus	.74	0.542	0	1	0.007	35.6
Georgia	.74	0.63	1	1	0.143	16
Poland	.73	0.734	1	1	0.042	29.2
Cyprus	.70	0.755	0	1	0.065	23.3
Romania	.66	0.683	1	1	0.209	17.4
Moldova	.63	0.569	1	1	0.076	21.3
Armenia	.56	0.639	1	1	0.079	13.4
Bosnia Herzegovina	.45	0.649	1	1	0.620	15.3
Northern Ireland	.41	0.791	0	1	0.559	24.9
Greece	.30	0.756	0	1	0.060	16.6
Ukraine	.30	0.662	1	1	0.527	20.1
Italy	.28	0.779	0	0	0.027	26.3
Ireland	.28	0.843	0	1	0.107	36.7
Croatia	.25	0.675	1	1	0.075	25.2
Macedonia	.06	0.609	1	1	0.307	26
Albania	.04	0.637	1	0	0.414	35.2
Slovak Republic	.03	0.787	1	1	0.200	26.1
Lithuania	.01	0.73	1	1	0.126	25.4
Portugal	-.06	0.726	0	0	0.119	32.2
Montenegro	-.07	0.718	1	1	0.469	23.9
Serbia	-.09	0.694	1	1	0.227	19.5
Russian Federation	-.14	0.67	1	1	0.171	16.7
Belarus	-.15	0.693	1	1	0.245	15
Latvia	-.19	0.717	1	0.67	0.674	25.8
Bulgaria	-.22	0.683	1	1	0.309	14.7
Austria	-.26	0.82	0	0	0.222	24.8
Hungary	-.30	0.759	1	1	0.389	28.9
Switzerland	-.43	0.84	0	0	0.625	26.7
Germany	-.47	0.842	0.2	0	0.562	24.7
Spain	-.48	0.799	0	0	0.387	26.9
Great Britain	-.48	0.791	0	0	0.534	24.9
Estonia	-.49	0.769	1	0.5	0.583	35.6
Slovenia	-.52	0.837	1	1	0.131	28.7
Luxembourg	-.54	0.799	0	0	0.198	31.4
Iceland	-.56	0.845	0	0	0.219	28
Belgium	-.57	0.819	0	0	0.197	22.8
Netherlands	-.63	0.846	0	0	0.670	29.2
Finland	-.66	0.833	0	1	0.069	29.3
Norway	-.72	0.89	0	0	0.193	29.1
Czech Republic	-.77	0.821	1	1	0.257	26.3
France	-.78	0.804	0	0	0.243	23.3
Denmark	-.93	0.842	0	0	0.049	27.1
Sweden	-1.18	0.851	0	0	0.167	32.7

Source: Religiosity and RP — EVS (2011); IHDI — United Nations site (values of 2011); RF — The Association of Religion Data Archives site (average of values of 2003, 2005, and 2008).

Note: IHDI — inequality-adjusted human development index; CR — communist rule, NI — national identity, RP — religious pluralism, RF — religious freedom. For IHDI and RF, the values of Northern Ireland and Great Britain correspond to United Kingdom. Malta does not have IHDI, so it was used a calculation to estimate it: since Italy is the closest country and probably the most similar culturally, using the ratio of Italian IHDI/HDI I multiply it with Maltese HDI to find Maltese IHDI. The value of IHDI for Northern Cyprus corresponds to Turkey, the closest country geographically. The value of IHDI for Kosovo corresponds to Albania, the closest country religiously, geographically, and economically.

optimise the solution found. For bivariate analysis, when one or both variables were nominal, I used Chi-square test (χ^2). To apply this test, there are some premises to be followed: a population larger than 20, all expected frequencies higher than 1, at least 80% of expected frequencies equal or higher than 5 (Maroco, 2010: 107). When at least one of these premises is not attained, Fisher's test (*Phi*) should be applied as a replacement (Maroco, 2010: 111-112).

Results and discussion

Dimensions and index of religiosity

Table 1 shows the values for the dimension of beliefs. The average value is "0", which separates higher (above "0") from lower (below "0") believing/ practising/ supporting/ religious people. In addition to the value of dimension by country, values per indicator are also shown. Muslim Turkey has the highest value on beliefs, followed by Catholic Malta and Muslim Northern Cyprus. The countries with "higher belief" are Muslim, Orthodox, or Catholic, except for Northern Ireland. Muslim countries are clearly those with the strongest believers: from the five with the highest belief scores, only Malta is non-Muslim. More exactly, Bosnia and Herzegovina is a mixed Muslim and Orthodox country; and Albania is the only "less believing" Muslim country. Orthodox countries are higher on belief than Catholic countries, which was unexpected. While Orthodox countries are evenly distributed between higher and lower belief, Catholic countries are less represented in the former.

In summary, Muslim countries are the highest on belief, followed by Orthodox and Catholic countries. Regarding "low believing" countries, Sweden has the lowest value, followed by Denmark and Czech Republic. All Protestant countries have low scores on belief, followed by Orthodox countries, Catholic countries, and only one Muslim country (Albania).

Table 2 shows the values for the dimension of practices. Malta (Catholic) has the highest score on this dimension, followed by Turkey (Muslim), Poland (Catholic), Romania (Orthodox), and Kosovo (Muslim). As expected, Muslim and Orthodox participants attend less religious services, while Catholics are the most practising. However, concerning the frequency of prayer, there are no differences between these three religions.

In summary, Catholic and Muslim countries are the most practising, followed by Orthodox countries. Regarding the "least practising" countries, Sweden has the lowest value, followed by the Czech Republic, France, and Estonia. All the "least practising" countries are Protestant or Catholic. However, Protestant countries have always not only negative scores of religiosity but also the lowest scores (the biggest is from Finland; Northern Ireland is a mixed country with strong specificity), while Catholic countries are more indefinite with the highest score (Malta) and one of the lowest scores (Czech Republic).

Table 3 shows the values for the dimension of attitudes. Kosovo and Turkey, both Muslim countries, have the highest values, followed by Armenia (Orthodox),

Azerbaijan (Muslim), Moldova and Georgia (both Orthodox). In sum, Muslim countries have the highest scores, followed by Orthodox countries. Regarding the lowest scores on this dimension, Sweden is the lowest, followed by Iceland and Denmark, all Protestant countries.

Let's now turn out attention to the index of religiosity (see table 4). Turkey has the highest index of religiosity, followed by Malta and Kosovo. As in previous dimensions, the countries scoring highest are Muslim, Orthodox, or Catholic, but not Protestant, except for Northern Ireland. Orthodox countries have higher scores than Catholic on this index. Sweden is the least religious country followed by Denmark, both Protestant countries. Overall, Muslim countries are the most religious followed by the Orthodox.

Factors of religiosity

The link between these indexes and factors of religiosity was tested through multiple regression analysis. Major religion could not be included in this analysis, since the only indicator available (religious belonging) is too ambiguous or dubious. By looking at the main results[14] two assumptions are established: first, 65% of the variation in religiosity is explained by the variation of the five factors; second, there are factors with positive and negative impact on religiosity. The first assumption shows that 35% of religiosity variation is explained by other factors, such as major religion. Regarding the second assumption, national identity is the only factor with positive impact on religiosity. In the group of the negative impact on religiosity, IHDI has the highest value, followed by communist rule, and by religious pluralism and religious freedom. These two factors are dispensable, as their values are quite low.

The discussion will be focused on IHDI: the higher the IHDI, the lower the religiosity (see table 4). Besides IHDI, the discussion will use the other two factors (national identity and communism). To check the impact of these two factors on religiosity two calculi were produced.[15] Both these calculi pretend to express that IHDI and the index of religiosity are directly proportional. In short, the first and the second groups should have lower and higher religiosity respectively for the observed IHDI, if IHDI was the only factor that influenced religiosity. Thus, countries with eclectic modernisation (under the influence of this two factors) show higher differences between observed and expected values of IHDI. If modernisation was the only factor impacting on religiosity, the expected and observed values for IHDI would be the same. However, the variance in religiosity is explained by the five

14 Standardised Beta — IHDI: – 0.728; communist rule: – 0.404; national identity: 0.424; religious pluralism: — 0.41; and religious freedom; – 0.043. Adjusted R square = 0.643. F (5, 41) = 17.548, p = 0.000.

15 To measure expected values two calculi were applied (IR: index of religiosity): (i) IHDI positive values: (highest value IR — observed value IR)*(mean IHDI — lowest value IHDI) / (highest value IR + lowest value IHDI); (ii) IHDI negative values: (-observed value IR)*(highest value IHDI — mean IHDI) / (-lowest value IR) + mean IHDI.

factors in about 2/3. Therefore, countries with higher differences (with modules over 0.06) were examined, because the impact of national identity and communism can be explored. The countries with positive higher differences are: Malta (0.17), Ireland (0.15), Cyprus (0.13), Northern Ireland (0.12), Poland (0.12), Italy (0.086), and Greece (0.067). The countries with negative higher differences are: Macedonia (-0.12), Albania (-0.095), Russia (-0.087), Bulgaria (-0.083), Moldova (-0.066), and Belarus (-0.065).

In the first group, Catholic or Orthodox Churches were the centripetal force of national identity: the first for Malta, Ireland, Poland, Northern Ireland, and Italy; the second for Cyprus and Greece. Catholic Malta and Ireland, and Orthodox Cyprus were ruled by the Anglican British Empire until the twentieth century, while Catholic Poland was oppressed by a communist regime. Northern Ireland was a battlefield where two parties were built around the Anglican and Catholic Churches. In Greece and Italy, the only countries with values below 0.10, there were no foreign rulers during the twentieth century, which perhaps can explain these lower values. In both cases, I follow Norris and Inglehart (2004), who argue that the impact of modernisation weakens with a strong religious culture.

The British Empire seems to have catalysed considerable feelings of national identity around the respective major churches: Malta (Abela, 2000: 28), as well as Ireland (Andersen, 2010; Coakley, 2011; Inglis, 2007) and Cyprus (Dietzel and Makrides, 2009: 80-81; Roudometof, 2009: 61). Malta is a unique case in European modern history, where the country's history merged with the Hospital Order of St. John of Jerusalem during more than two hundred and fifty years (1530-1798). Ireland is also a single case where its Celtic language and ethnicity fused strongly with the Catholic Church. In Cyprus, the link between politics and religion was so powerful that its first president was an Archbishop, something unthinkable in Catholicism or Protestantism. In Northern Ireland, the conflict that opposed natives to settlers, Irish to Scottish and English, was clearly of religious origins, confronting Protestants and Catholics (Barnes, 2005: 67).

The Catholic identity of Poland was stimulated through its partition with Russia and Prussia, then communist USSR and Nazi Germany, as Russians were regarded as Orthodox and the Germans as Protestants (Borowik, 2002: 240). Furthermore, during the last phase of communism, the Catholic Church was ruled by a Polish pope. For Italy, its national identity is intimately linked to religion through its history and the presence of the Vatican. Finally, Greece and Orthodoxy are strongly linked: the Church guided the Greeks through the Ottoman period and the war of independence, separating itself from the Patriarchate of Constantinople and cementing its bond with the Greek nation (Molokotos-Liederman, 2003: 292-293).

In the second group, all countries are Orthodox (except Muslim Albania) and were under communist rule. There are three possible reasons for this. First, none of these countries is Catholic, which derailed the opportunity for a stronger commitment against communism. Second, harder communist regimes broke down religiosity in Albania, Russia, and Belarus. Third, the weakening of Orthodoxy eroded religiosity in Macedonia, Bulgaria, Moldova, and Belarus.

Albania suffered a great communist persecution during forty years of the Hoxha's government and under Ottoman rule religion did not play any role in national liberation, which is a single case in the Balkans (Young, 1999: 7-9). Russia was the center of communism, so religious persecution and atheistic propaganda were particularly strong in this country. Probably, the path for communism as messianic secular narrative was facilitated by Russian messianic thinking, supported by the absence of individual rights during authoritarian tsarist state. Belarus suffered great Stalinist persecution when the policy of Sovietisation was applied. Furthermore, the Belarusian Orthodox Church, though autonomous, depended on the Russian Orthodox Church, which made it an accomplice of Russian oppression in people's eyes.

This weakness of Orthodoxy was also present in three other countries. In Macedonia, the creation of the Socialist Republic of Macedonia and the Macedonian Orthodox Church by Tito made the church further dependent upon the communist state. Added to this, with the conflict of 2001 between Macedonians and Albanians, the Constitution had to be revised in order to establish better relations between the major ethnic groups, leading to a decrease of membership in the Macedonian Orthodox Church (Ivekovic, 2002: 533). In Bulgaria, the politicisation and schism within the Bulgarian Orthodox Church largely reduced its authority and confidence, alienating the needs and the problems of believers (Bogomilova, 2005: 15-19). Further, it competed with the political elites for influence, limiting its power by making it financially dependent and by dividing it. In Moldova, the Moldovan Orthodox Church's involvement in political affairs to the detriment of sacred things led to a loss of trust (Panainte, 2006: 95-98). As it happened, the separation of the Orthodox Church of Bessarabia from the Orthodox Church of Moldova, and its subsequent association with the communist government, in order to keep its hegemonic role, provoked a decline of trust in it.

Clusters of religiosity

Results of clusters analysis are examined in figure 2. This analysis combines and resumes the previous two. Three clusters were found. Cluster 1 has the highest religiosity (mean = 0.75), composed by 13 countries (from Turkey to Northern Ireland). Cluster 2 shows an average religiosity (mean = 0.02) and is composed of 17 countries (from Greece to Austria). Cluster 3 has the lowest religiosity (mean = -0.62) and is composed of 16 countries (from Hungary to Sweden). Catholics are more represented in cluster 2, followed by cluster 3, and cluster 1 (means = 0.19, 0.35, 0.27; *Phi* = 1.315, $p = 0.319$). Protestants are prevalent only in cluster 3 (Northern Ireland and Latvia are the exceptions) (means = 0.03, 0.03, 0.30; *Phi* = 1.154, $p = 0.386$). Muslims are present only in cluster 1 (Albania is the exception) (means = 0.30, 0.06, 0.01; *Phi* = 1.087, $p = 0.566$). Orthodox are only in clusters 1 and 2 (Estonia is the exception) (means = 0.39, 0.31, 0.02; *Phi* = 1.191, $p = 0.453$). People without religion increase from cluster 1 to cluster 3 (means = 0.07, 0.23, 0.36; *Phi* = 1.393, $p = 0.385$). IHDI increases from cluster 1 to cluster 3 (means = 0.66, 0.72, 0.82; *Phi* = 1.340, $p = 0.346$). Communist rule is significantly higher in clusters 1 and 2 (means = 0.62, 0.71, 0.25;

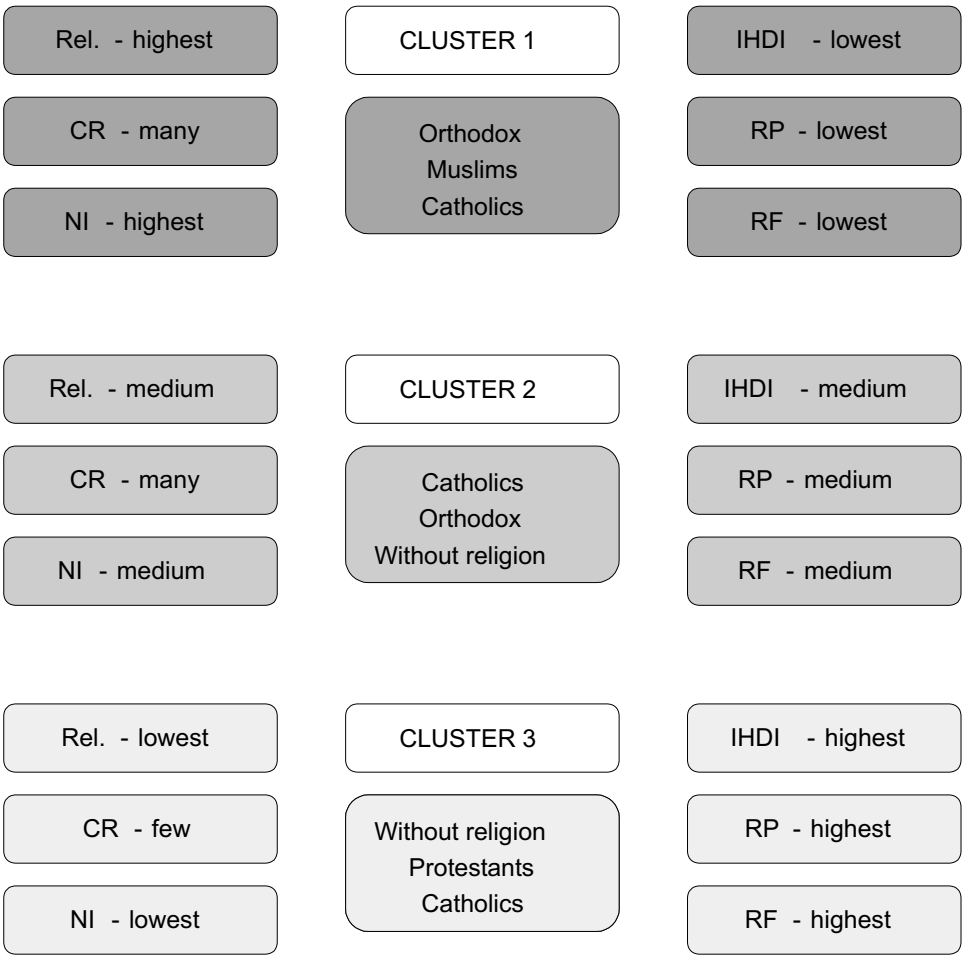

Figure 2 Clusters of religiosity for European countries

Phi = 0.442, $p = 0.057$). National identity significantly decreases from cluster 1 to cluster 3 (means = 0.92, 0.75, 0.27; *Phi* = 0.638, $p = 0.004$). Religious pluralism increases from cluster 1 to cluster 3 (means = 0.18, 0.25, 0.32; *Phi* = 1.390, $p = 0.456$). Religious freedom increases from cluster 1 to cluster 3 (means = 21.5, 24.1, 28.0; *Phi* = 1.266, $p = 0.566$).

In sum, cluster 1 is the most religious, composed of Orthodox, Muslim, and Catholic countries, many formerly under communist rule, with the lowest degree of IHDI, religious pluralism, and religious freedom, and the highest level of national identity. Cluster 2 is moderately religious, being composed of Catholics, Orthodox, and people without religion, many formerly under communist rule, with an average degree of IHDI, religious pluralism, religious freedom, and national identity. Cluster 3

is the least religious and is composed of Protestants, Catholics, and people without religion, few formerly under communist rule, with the highest degree of IHDI, religious pluralism, and religious freedom, and the lowest degree of national identity.

Conclusions

This study included an analysis of religion across all European countries, using the most recent international data available. Its first goal was to measure religiosity through an index composed of beliefs, practices, and attitudes, something never done before. Results show that the Islamic and the Protestant countries present the high and low points of religiosity. Turkey, Malta, and Kosovo are the most religious, while Sweden and Denmark are the least religious. Orthodox and Catholic countries are in-between, though the first are in general more religious. Here, results and theory do not match so well, which possibly suggests that major religion is an important factor in explaining religiosity. As a recommendation for future studies, I suggest that at least one indicator of experiential dimension should be introduced in order to increase the quality of the index of religiosity.

In relation to the second goal, the five hypothesised factors achieved to explain 65% of variation of religiosity. This leaves the remaining 35%, which can partly be explained by major religion and other factors not included in the current model. Modernisation measured by IHDI is clearly the most important factor for explaining religiosity, as theoretically predicted. According to Norris and Inglehart (2004), higher modernisation implies higher religious decline (beliefs, practices, and norms). However, because major religion was not included in the model, due to the inexistence of at least one unbiased indicator in the EVS (2011), these results must be treated with caution.

Notwithstanding the negative impact of modernisation on religiosity, there are two other factors that may explain the differences found for levels of religiosity: national identity and communist rule. Their contribution can be better explored when differences between observed and expected IHDI are significant. For the countries with positive values, only non-ex-communist countries (except Poland) were included. The conjecture of Hollinger, Haller and Valle-Hollinger (2007) concerning an association between national identity and religion was confirmed. For all countries ruled during the twentieth century (except Greece and Italy), their religion was different from that of the rulers. For these two countries, the strength of their religious cultures can explain the shrinkage of modernisation's impact (Norris and Inglehart, 2004). This feature is also intrinsically recognisable for all countries with a national identity linked to religion. Lastly, the Catholic nationalism of Poland confirms assertions of Borowik (2006) and Plaat (2003), who argue that the Catholic Church had a stronger role in fighting communism.

For the countries with negative values, all of these are Orthodox (except Muslim Albania) and were under communist rule. None of them are Catholic, which again confirms Borowik (2006) and Plaat's ideas (2003). Lastly, there was a decline in the Orthodox Church in four of six countries, which confirms the

conjecture of the importance of a strong Orthodox Church to strengthen religiosity (Bogomilova, 2005; Froese, 2004).

Amidst the various factors, religious pluralism and religious freedom were the least important, indicating that level of religiosity is relatively independent from them. However, the results reveal that lower and higher religiosity is linked to higher and lower pluralism and freedom respectively. Thus, the conjecture of Norris and Inglehart (2004: 230) is confirmed: there is not a significant relationship between religiosity and religious pluralism and freedom, though countries with hegemony and regulation are more religious.

Regarding the last aim of the paper, three clusters of religiosity were found. The clusters integrate the previous two sets of results. The third (and the second) set of results have the dilemma of using combined and not individual data, which is reductive of reality and does not allow for a finer analysis by country. The degree of religiosity and national identity decrease from cluster 1 to cluster 3, while the degree of IHDI, religious pluralism and freedom increases. Ex-communist countries are mainly in clusters 1 and 2, and few in cluster 3. Muslims are all in cluster 1 (except Albania, due to the hard communist regime) while Protestants are only in cluster 3. Orthodox and Catholics are equally represented in cluster 2, but the Orthodox are also represented in cluster 1 but not in cluster 3, while Catholics are poorly and well represented in clusters 1 and 3 respectively. The number of people without religion increases from cluster 1 to cluster 3.

This study has a number of novelties. First, I ignore other studies that jointly analysed religiosity, the factors that affect it and its clustering. Second, it upgraded other studies concerning religiosity and related societal factors, since it included all European countries. Third, the index of religiosity is reliable, even if it can be improved. Fourth, it is the first study to group European countries by religiosity. The broadness and methodological thoroughness of this study presents a more accurate and comprehensive portrait of European religiosity reality and the societal factors that command it.

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